

HARVARD MEDICAL ALUMNI BULLETIN

Medicine in Soviet Russia

By James M. Faulkner, M.D.

The Baker Memorial Hospital

By William B. Breed, M.D.

Medicine Carries on in China

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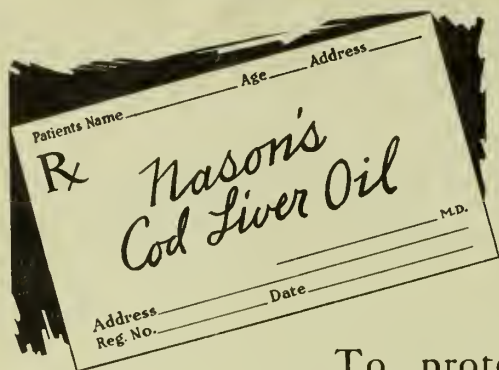


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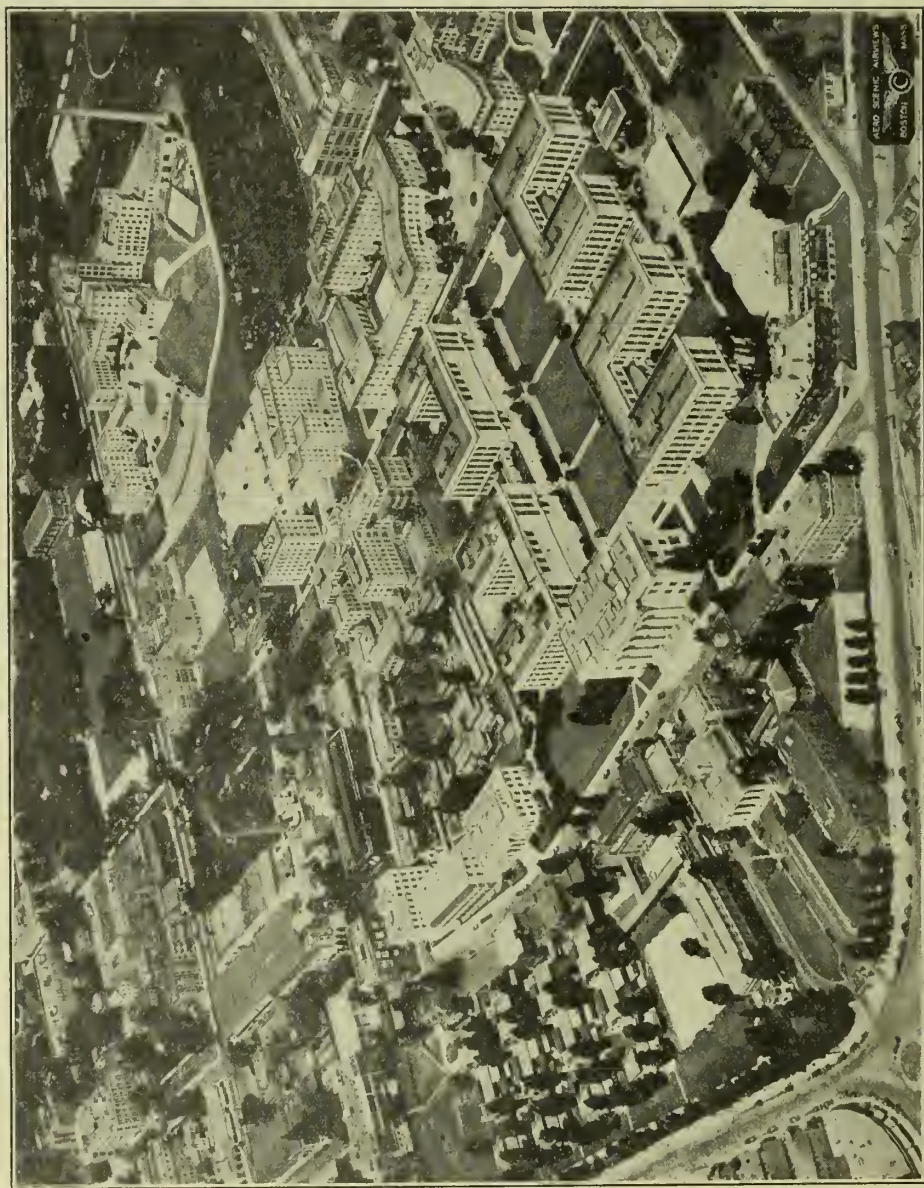
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An Airplane View of the Harvard Medical School, School of Public Health, and Neighboring Hospitals.

Medicine in Soviet Russia

By James M. Faulkner, M.D.

IN the course of a month's visit to Soviet Russia in the summer of 1931 I had the opportunity of making some very superficial observations on the state of medical education and practice in that country. My own stay in Russia was so short, and the difficulty of obtaining reliable medical information through a lay interpreter so great, that I would not feel qualified to publish these observations had I not had the helpful collaboration and criticism of a native born Russian and Harvard Medical School graduate, who was also in Russia at the same time. Unfortunately my collaborator does not dare to have his name appear above this article for fear that the Soviet authorities would take offence at some of the unfavorable criticism and would make reprisals on members of his family who are still within their jurisdiction. He shall, therefore, remain anonymous.

Like every other branch of Russian life, medical education and practice have undergone a tremendous change since the Revolution. The shortage of doctors has led the government to lessen the admission requirements so that students are now admitted to the medical schools after only seven years of schooling—somewhat less time than our children spend in grammar school. The average age of students entering medical school, however, is about the same as that of our college freshmen. This is due partly to the fact that children entering upon their *semilietka*, or seven-year grammar school, are older than our first-grade primary school pupils, and partly to the fact that many of the students have to

work for several years after graduating from the *semilietka* before they are admitted to the university. In Leningrad I met two young men who had been rewarded for faithful labor in a coal mine by being transferred to medical school. Loyalty to the Communist Party and a family background of laboring or peasant stock are essential for admission to the universities. Children of former merchants or other members of the "white collar" class are barred from institutions of higher learning.

The medical course consists of four years' work in the medical school with only one month's vacation per year, and a two years' internship in a hospital. A great many students are also being specially trained for public health work. They take their first two years in the medical school and then two years in a school of public health. After completing his internship the young physician is sent to an outlying village to practise for three years, being allowed to choose the village he prefers from a list furnished by the government. He is, of course, paid entirely by the government, the people receiving his services free. After three years of village practice he is at liberty to move to wherever he can find a more attractive position with the government.

Most physicians are paid a salary of one hundred and thirty roubles (\$65) a month, although a few specialists and others holding responsible positions are paid as much as two hundred and fifty roubles (\$125) a month. This scale of salaries is in contrast to that of the engineering profession which is paid as much as three hundred

roubles (\$150) a month after only two years in engineering school. The young girl who served as our guide and interpreter was paid more than the average doctor. The low salaries and the long training make medicine far less attractive than engineering as a career for ambitious young men, and the medical students represent in large measure if not the dregs, certainly not the cream of the university undergraduates. The great majority of medical students, as a matter of fact, are women. One Russian doctor jokingly told me he thought he would have the word "man" put after his name on his visiting card, to distinguish him from the rest of the profession.

The doctor in the large city works five hours a day for five days and then has a day off. The type of work varies widely, of course, depending on the specialty in which he is engaged. The general practitioner has an office in a local dispensary where he sees ambulatory patients, and makes visits to the homes of those patients in his assigned district who cannot come to the dispensary. Whether or not private practice is officially permitted "out of hours" I could not ascertain, having been told on equally good authority that it is and that it is not. But whether strictly lawful or not, a certain amount of it does go on and some of the older physicians with established reputations are able to increase their incomes to some extent in this way. A bourgeois physician can perhaps sympathize with a certain avidity for sordid gain on the part of his communist brethren when he learns that it costs a Russian doctor a month's salary to buy a pair of shoes. He is able to buy only a sufficient amount of coarse food to keep himself alive and usually does not have enough left over to buy suitable clothing. His wife must work to keep from starving. Automobiles and even bicycles are out of reach of private ownership for a doctor. Under the dictatorship of the proletariat social and political attention is concentrated on industry.

What has happened to the older doctors

who were practising in Russia before the war? A great many of those who chose to conform to the new régime have been placed in positions of responsibility in the hospitals and medical schools. Some of them rank very high in medicine on the continent. One receives the impression that the important hospital positions are still filled almost entirely by these men of the old school and one wonders what will happen when the new generation of Soviet-trained, predominantly female doctors take the helm. The Soviet government has been unsparing in utilizing to the utmost the abilities of its outstanding medical teachers. The great Professor Lamojlov of Kazan was obliged to give courses in three universities in different parts of the country, a factor which undoubtedly hastened his death.

A brief digression must be made here to speak of Professor Pavlov's unique position in the U. S. S. R. Pavlov has bitterly hated the Communist Party from the beginning, but Lenin always held him in great respect and on his deathbed decreed that Pavlov should never suffer harm at the hands of the government. The political immunity which he has thus enjoyed has made him literally the only person in Russia who has freedom of speech. He has not hesitated to use his privilege and his lectures in physiology are frequently enlivened with fiery denunciations of the Soviet government for its narrow dogmatism and its cruel treatment of many of his fellow scientists.

The limitations of space forbid an adequate discussion of the hospital and public health work in Russia. The program which has been embarked upon is positively staggering and exhibits the most astonishing contrasts to the visitor. One encounters on the one hand large cities with foul open sewers running down the streets, universally polluted water supplies, complete lack of fly screens everywhere, and, if one does not actually see, one soon surmises the presence of bed-bugs in nearly every train, boat, or hotel in which one has occasion to

sleep. On the other hand, one sees model dispensaries expensively equipped to the last detail, including elaborate electrotherapeutic and hydrotherapeutic devices, splendidly equipped and apparently well-run municipal hospitals, countless day nurseries full of well-fed, clean, healthy babies. In the dispensaries and in other public places the government carries on a vivid poster campaign against alcoholism, venereal disease, typhoid fever, and other preventable diseases. The technique of contraception is freely taught to all who request the information.

If one is to hazard an opinion on the progress of medicine in Russia since the Revolution one must make a distinction be-

tween the medical sciences *per se* and public health activities. In medical science, as in all branches of higher learning, one feels that the rigid dogma of communism has not provided the freedom of thought and expression which inquiring minds require for their fullest development. In addition, the lowered standards of admission to the medical schools and the debasing of the medical profession, from the social and economic point of view, have had their effect in lowering the caliber of the men and women who are entering the profession. In public health work, however, there is no doubt that great progress has been made, particularly in the field of child hygiene.

The Baker Memorial Hospital

By William B. Breed, M.D.

SHORTLY after the opening of the Baker Memorial Hospital in 1930, an article appeared in these pages which outlined the general plan for hospitalization of people of moderate means, the attitude of the Staff and the hopes of the Trustees of the Massachusetts General Hospital. At this time, when there is evident such wide-spread interest in the cost of medical care, it seems pertinent to review generally and specifically the progress of this experimental project during the past two years. It is felt that all Medical School graduates, even though not directly connected with the hospital in question, will welcome information of this sort.

It is to be recalled, to begin with, that the attempt in Boston to provide good medical care for the people with limited incomes, differs sharply in two respects from other efforts in the same direction, undertaken earlier and simultaneously. Others have created endowment funds, the income from which was to be used to pay part of the

hospital expense which the individual patient could not meet, thereby making him partially a direct object of charity. Moreover, in these systems, the professional fee was ignored; often the physicians' services were avowedly free. At the Baker all expenses, including nursing, laboratory, X-ray and doctors' fees are, in so far as it is possible, estimated on a budget basis during the first interview between the patient and the hospital official. The hospital undertakes, after careful individual budgeting, to collect all fees, including those agreed upon for professional care. You will recall that the total professional fee is limited to one hundred and fifty dollars. It is to be recalled, also, that the Julius Rosenwald Fund, in order to give impetus to this general idea, has agreed to contribute to the deficit expected during the first few years up to a maximum of \$75,000 or 50 per cent. of the deficit in any one year, with a total of not more than \$150,000 during the first three years.

It is obvious that the answers to many important questions in connection with this large problem cannot be answered now; but the data are slowly being accumulated. Moreover, it is to be emphasized that the attitude of those most interested in the Baker project is by no means an unalterable one. In fact, minor changes are brought about frequently, and there is every reason to believe that with the passing of time and increased experience, fundamental progress will be made constantly in all departments.

During 1931, 3,244 patients were admitted, distributed as follows:

Surgical	1,436
Obstetrical	81
Orthopaedic	234
Throat	274
Eye	47
Urological	239
Ear	19
Medical	846
Dermatological	3
Neurological	65
	<hr/>
	3,244

During this period (one year) an average of 100 different staff members used the hospital each month. Of the 193 beds available daily, 125 were in constant use. Fourteen days was the average duration of stay in the hospital, and the average daily payment for board alone was \$5.53. The average professional fee paid during the year was \$60.48 per patient, or about \$4.31 per patient per day. This figure includes patients of all kinds, whether operated on or not.

The X-ray Department received \$7.81 per patient examined or treated. Larger figures show that the total average amount received per patient was \$105.76, excluding physicians' fees of \$60.48, noted above.

The average monthly deficit was \$5,828.50 including share of corporation and insurance expense, or \$21.56 per patient.

Further light is thrown on the progress of the Baker by analysis of the occupational groups among the patients. Obviously, the institution is intended to serve people

of moderate means above the class of poor families, and not including the well-to-do. During the first ten months the following group proportions are recorded: professional (including physicians and their families, dentists, nurses) 28 per cent.; mercantile 29 per cent.; artisan 32 per cent.; retired 3 per cent.; unknown 8 per cent. During 1931, a still larger percentage of the professional group chose the Baker for hospitalization, a fact that indicates confidence among the medical and allied professions in the service rendered in the institution.

The closing paragraph in C. Rufus Rorem's report to the Julius Rosenwald Fund, published in 1931, on the first year's experience of the Baker Memorial Hospital follows below. It is a summary of an analysis by an unprejudiced observer, a member of the staff of the committee on the costs of medical care.

"The success of the Baker plan cannot be adjudged solely by the financial experience of the first year. The significance of the venture lies in the coordination of professional and hospital services and of their total costs to the patient. The first twelve months show that the total bill has been limited to a moderate amount compared with what is usual for similar service in the same community. The actual cost figures in Boston cannot be compared with those in small communities or with city costs in some other parts of this country. The ultimate soundness of the plan will be tested not only by the economies of the patient, but also by the effects upon scientific standards and the earnings of the medical and nursing professions. Studies at a subsequent period must be made of these professional phases and of the accounting and financial aspects which could show what economies had been achieved and what is the relation between income and costs. In the meantime it may safely be said that the Baker Memorial of the Massachusetts General Hospital has made available to its patients a type of service and a plan for reduction of total costs which did not previously exist for them."

Medicine Carries on in China

By Theodore C. Greene, M.D.



THE three-day clinic in the old Temple of the City God in the town of San Ho had closed. A friendly old gentleman wandered into the courtyard and told me the story of the Temple. Then he looked up and into the past as he concluded, "Three hundred years; not old, not old." What is three hundred years? Peiping has a history of three thousand years.

Then entered a keen young member of the Country Board of Education, which now occupies the Temple. We had a most interesting talk on health education and medical service for the county. Here is the picture; a great past, and the China of today courageously tackling tremendous problems.

China's Problems.

After the War of the Revolution our thirteen colonies contained only about four million people, who lived in a comparatively small strip of land, spoke one language, had a high degree of literacy, and had a

common heritage of parliamentary government; yet it was only with the greatest difficulty that the Union was formed in that "critical period of American history." China contains over four hundred million people who occupy a vast territory, speak a number of dialects, have a high degree of illiteracy,¹ and have no common heritage of national representative government.

Add to these difficulties of China in achieving unity, the fact that circumstances force China to pass simultaneously and rapidly through political, social, intellectual, and industrial revolutions through which other nations passed slowly and often separately. The problems of England, the United States, Italy, and Germany in achieving political unity, when these national governments were formed, were as

¹But the illiterate masses are intelligent. The stories told by the Chinese professional storytellers in the restaurants and tea-shops throughout China are on a higher and more literary plane than most American moving pictures, magazines, or radio emanations.

nothing compared with the problems of China. Yet in spite of these troubles, last fall China was completely united under one government except for a political group in Canton which is now part of the government.

Another difficulty for China lies in the actions of Japan who has repeatedly tried to obstruct unity in China, because Japan's strength in exploiting China lies in lack of unity in China. The present events speak for themselves, and are consistent with the past actions and attitude of Japan.

Medical Progress.

In the field of medical progress in China, Harvard is playing a part. In Nanking, at the head of the Central Health Administration of the Government, Dr. J. Heng Liu, '15 is fighting disease with great ability and energy.² A Harvard graduate who has worked long and successfully for medical progress in China is Roger S. Greene, Vice Director of the Peiping Union Medical College, and Chairman of the China Medical Board.

A most interesting part of a course in ophthalmology which I attended last year at the Peiping Union Medical College, was the series of lectures given by Dr. W. P. Ling, '20, on the histology and histopathology of the eye. When I want expert opinion on general pathology or on blood, I turn to Dr. C. H. Hu, '21, who has been doing very interesting work on lymphocytes³ as well as in general pathology at the Peiping Union Medical College. In the Department of Public Health at the College, Dr. T. A. Li, '29, Dr.P.H., is carrying on a splendid piece of work.

Former members of the College staff, now in America after many years of val-

uable service, are Dr. O. H. Robertson, '15, Dr. A. S. Taylor, '16, and Dr. G. W. VanGorder, '17.

Dr. H. Yu, '29, Dr.P.H., is engaged in bacteriological work at the National Epidemic Prevention Bureau, where vaccines and sera are made. Dr. R. P. K. Wang, '25, is also reported to be in Peiping. Dr. S. C. H. Chuan, '12-'13, is in charge of the Department of Public Health of Tientsin. I have been told that Dr. C. C. Ch'en, M.P.H. '31, is in Tingshien with the Mass Education Movement.

In Shanghai is Dr. A. M. Dunlap, '10, who for many years has been at the head of the Department of Otolaryngology of the Peiping Union Medical College. Last year he returned to Shanghai, where he first taught and practised in China. Dr. W. S. New, '14, is at the head of the Orthopedic Hospital, and is one of the leading doctors in China. The outstanding investigator in the use of soy bean milk in feeding infants is Dr. E. T. Tso, '19. Dr. S. T. Woo, '19, is practising internal medicine, and is especially interested in allergy. I have been told that Dr. W. S. Fu, '25, is practising pediatrics. It is reported that Dr. S. F. Chiang, '25, Dr.P.H., is also in Shanghai.

In other parts of China are Dr. C. C. Selden, '82-'84, Dr. H. Thomas, '15, Dr. R. E. Merrill, '20, Dr. K. N. Yang, '25, and Dr. P. T. Watson, '25, M.P.H., who has fought many pneumonic plague epidemics in northwest China.

Dr. P. F. Greene, '19, Dr. C. Atwater, '09-'10, Dr. J. A. Curran, '21, and Dr. R. H. Meade, Jr., '21, now in this country, have all rendered valiant service in China. Dr. H. L. Robinson, '22, and I are on furlough, and, return to China this summer. Corrections and additions to this list are welcome.⁴

As examples of what can be done by men already busy with the routine work of mission hospitals I mention three pieces of work. Curran and his co-workers at Fenchow, Shansi, reported the blood grouping

²The medical aspects of the flood present urgent and great problems. See a note in the "Medical News", Journal of the A.M.A., vol. 98, p. 650, Feb. 20, 1932.

³A recent paper by Dr. Hu is Lymphatic Reaction in Experimental Trypanosomiasis. National Medical Journal of China, vol. 17, p. 435, 1931. Abstracted in J.A.M.A., vol. 97, p. 1929, 1931.

⁴This article was written by Dr. Greene while he was a patient, in quarantine.

of 1,000 Chinese in Shansi⁵ as a contribution to the study of racial blood groups; and as a contribution to the study of the parasitology of the same region reported the laboratory findings on over 1,000 patients.⁶ As far as I know, these are the first studies of their sort in northwest China. Robinson⁷ described a six weeks' vaccination campaign carried on in 1930 by the hospital at Lintsing, Shantung, where he is stationed. Carefully selected and trained

should prove an incentive to other universities.

A Hospital.

A description of one hospital and its work will suggest one kind of medical work in China. The fifty-five bed hospital⁸ in which I am one of four doctors is the only general hospital for the northeast part of Peiping, a city of about one million people, and the hospital is interested in a country area described below. The medical work of the mission station began in 1881, and has continued without interruption until the present. The teaching of assistants, nurses, and doctors for a number of years in the Union Medical College, and always in the hospital, has been an important part of the work. Connected with the hospital is a nurses' training school in which about thirty students follow a four-year course.

The first picture shows my very able colleague Dr. Chang standing behind two testimonial tablets that were given to the hospital by a grateful patient. Free translations of the characters are, "Beneficent Saver of Human Life" and "Hua T'o Come to Life Again." Hua T'o is the most famous surgeon in Chinese history. In a little country town I have heard a professional story-teller at a side-walk restaurant entertain his listeners with the exploits of Hua T'o and other characters in the famous epic, "The Three Kingdoms." The patient who presented these tablets had received a wound that cut the jugular vein, from which much bleeding had occurred. The larynx was also wounded, and inside the larynx there was a steady oozing of blood. This problem demonstrated well the value in surgery of good exposure, a good headlight, and suction. The patient's pulse and blood pressure were normal before he left the operating room.

The second picture shows three patients



vaccinators toured the country, and vaccinated over 8,000 people against smallpox. In 1931 the same campaign was carried on with the same results.

One must pay tribute to what another university has done for medicine in China. From the work of that great pioneer, Peter Parker,⁸ to the splendid work of Yale - in - China, Yale has provided an example that

⁵Curran, J. A., Rosenow, E. C., Feng, S. T. Blood Groups in Shansi. National Medical Journal of China, vol. 16, p. 75, 1930.

⁶Curran, J. A., Feng, S. T. Survey of Human Parasites in West Central Shansi. China Medical Journal, vol. 44, p. 891, 1930.

⁷Robinson, H. L. A Country-Wide Vaccination Campaign in Lintsing, Shantung. China Medical Journal, vol. 44, p. 1055, 1930.

⁸Blake, E. M. Yale's First Ophthalmologist, the Rev. Peter Parker, M.D. Yale Journal of Biology and Medicine, vol. 3, p. 387, 1931.

⁹Douw Hospital. See Alumni Notes, under T. C. G., '24.



who had fractures. The boy on the left came to the hospital one month after sustaining a compound fracture of both bones of the leg. At entry, malunion with marked shortening and angulation was present, the bone projected through the skin, and free pus flowed from the wound. Malunion was broken, free drainage made, and skeletal traction established with a home-made device that cost less than one cent. He left with bone and soft tissues well healed and with no shortening. The boy in the middle came with a fresh compound fracture, and presented no difficulty. The man broke his thigh. Locally made "ice-tongs" that cost less than one dollar were applied. The man has a completely satisfactory anatomical and functional result.

These patients were treated without X-ray facilities. They were lucky, but I am afraid that other patients have been less fortunate. I feel the lack of X-ray equipment even more in the presence of early pulmonary tuberculosis and other conditions than I do in treating fractures. I hope in some way I can take back to China the X-ray equipment which is needed not only for the care of the patients but for the proper training of all the doctors on the staff. Incidentally, all doctors, nurses, and servants in the hospital, and others in Peip-

ing have made contributions which will provide the X-ray room, dark room with plumbing, and certain equipment that can be made locally.

The laboratory is even more important in China than in the temperate zones of America because of the presence of such diseases as typhoid, typhus, malaria, relapsing fever, the dysenteries, and kala azar. Our laboratory is equipped for the usual tests, for making dark field examinations, cultures, sections of tissues, and for the supra-vital staining of blood.

Country Medical Work.

About fifty miles to the east of Peiping is a rural area in which our mission is interested. This area contains about 1,600 square miles, and in it live about three quarters of a million people. As far as I can tell from visiting this area and from Chinese who live there, in this area there is not a single modern trained doctor, Chinese or foreign. The same condition probably exists in the surrounding territory, except for one small city twelve miles to the east of Peiping. For accidents, preventable blindness, childbirth, there is no medical provision.

The plan of the hospital is to coöperate with the local officials in the area in the following project. The hospital will give a

simple but thorough training to a few men who are carefully chosen from this area. The training, which is given to only one or two men at a time, consists of several months' individual instruction in the preparation and application of simple dressings, vaccination, the treatment of trachoma and other diseases of the eye, the use of a few safe internal remedies, the keeping of records of their work, and knowledge about preventing disease. Under control and with hospital backing such local assistants can do much good. Modern trained midwives are badly needed.

A doctor from the hospital will visit the places where the local assistants are working, preferably every two weeks. In each place he will see patients with the local assistant, advise treatment for the next two weeks, perhaps take certain patients back to the hospital, and in the evening give illustrated talks on the prevention of disease. Small as is the financial margin of the people, they can and do pay for the medicines and dressings used. Two men and one woman have received training for this work, and the hospital has already held a number of country clinics.

In making some chests for this country medical work, corks were first secured, then bottles were made to fit the corks, and then the chests were made to fit the bottles. The chest in the picture contains diagnostic and surgical instruments, including a mercurial sphygmomanometer and electrical ophthalmoscope, dressings, medicines, records, and health literature. A similar but shorter chest contains a microscope, centrifuge, and other laboratory equipment. A third small chest contains sterilizers, basins, and drugs in bulk.

Country Clinics.

Last year a group of Chinese in this area asked me to hold a clinic in the temple mentioned above. My companion on this trip was Mr. Dean, an engineer in our mission. We packed our medical and camping equipment on a cart, and walked more than one hundred miles. The roads can be used by automobiles, but the automobile is lacking. The operation of this cart, used as an experiment, cost twice the money and fourfold the time that a small motor truck would have cost. We stayed at country inns along the way, and at the



temple lived in the Theatre of the temple.

When the clinic opened, I was naturally aghast to hear some one announce to the assembled crowd that here was a surgeon, internist, orthopedist, ophthalmologist, and so on. Preventable blindness, a large benign tumor of the lip, uncorrected deformity, simple infections that had become serious through neglect, and other conditions presented a great appeal for continued work in this town with the system outlined above.

Even occasional visits can accomplish more than one would expect. A clinic in another town revealed several patients who needed operations for entropion. Later Dr. Kao and Miss Ho, a graduate nurse, went to the town. In her two days there Dr. Kao operated thirteen times for entropion, treated twenty patients each day in addition, and then returned to the hospital. For two weeks Miss Ho cared for the patients who had been operated upon, was a great help to the community in the rest of her time, and then returned to the hospital.

A small motor-truck or at least a motorcycle with side-car body would be the logical means of transportation in this work. But if I cannot secure either truck or motorcycle, and must use my bicycle when I return, I am going to work out this hospital extension program with at least one village, with other "untreated" villages as controls. I have in mind not only the patients treated, but the performing of an experiment in rural medical service. Scientific medicine can be practised in the country. Records of each patient are kept in the country clinics exactly as they are in the out-patient department of the hospital. Since probably ninety per cent. of the people of China live in the country, the problem of country medical work is of great importance.

Every Hospital a Teaching Hospital.

At the present time China is changing from the old to the new, in the field of medicine as well as in other fields. Old-

style medicine, studied by the new medicine, has given us ephedrine, and is not without merit. But the old style practitioner cannot meet the medical problems of today. On the one hand is an able group of modern trained Chinese doctors, numerically small in relation to the need, because this is the period of change. On the other hand is the largest medical problem that any country ever faced. How can American doctors best help in attacking this problem?

I believe that American doctors who have the privilege of working in China can best help by coöperating with Chinese doctors and nurses in training more doctors and nurses for China. It is important to remember that medical education is not limited to medical schools. Every hospital should be a teaching hospital, with every doctor in it contributing to the professional growth of the staff. Where a Chinese member of the staff has had more experience, he naturally should take the leadership. Where an American doctor has had more experience, he should have his Chinese associate take the responsibility and leadership and then help him. These principles are followed in the institutions with which I am familiar.

Conclusion.

In spite of great difficulties, progress in political unity, education, and in other fields goes on in China. This paper suggests the various kinds of medical work that are attacking the medical problems of China. In a large medical center and in small hospitals, in port cities and in the interior, doctors are following their work of prevention, cure, relief, investigation, and teaching. Medicine carries on in China.

LECTURE BY DR. L. J. HENDERSON

Dr. Lawrence J. Henderson, Professor of Biological Chemistry at the Harvard Medical School, lectured on "The Influence of Galileo on Medical Science" in the amphitheatre of Building C of the School on Tuesday, March 8.

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can easily see that the individual has been constantly losing ground to the organizations in medicine. Freelance physicians are trying to compete with groups of specialists who are organized to handle patients with the degree of efficiency of a sausage factory. Hospitals which were originally organized as asylums for the sick-poor have grown into huge institutions which care for the rich and middle classes as well. Countless publicly supported tuberculosis sanatoria have sprung up to take care of a problem which the individual practitioner could not meet alone. These are only a few of the signs which point to an unmistakable trend. On the one hand the care of a large mass of the sick-poor and middle classes is passing out of the hands of individual practitioners into the control of lay organizations, charitable, municipal, or industrial. On the other hand an increasing amount of private practice is being handled by privately organized medical groups or "clinics". Between these two millstones the independent physician is already beginning to be pinched.

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OUR TUBERCULOSIS PROBLEM

To the Editor:

My attention has been called to the recent letter on "Our Tuberculosis Problem" written by George P. Reynolds and published in the BULLETIN.

It seems to me that his suggestion of a routine, annual tuberculosis examination of all medical school students is admirable, not only on account of incipient cases of tuberculosis which may be discovered, but also for the educational value upon the students themselves. I think most of us will agree that the clinical teaching of tuberculosis in the great majority of our medical schools at the present time is quite inadequate, especially in so far as it pertains to our newer knowledge concerning sources and modes of infection. The type of examination which you suggest in the med-

Whither
Medicine

The discussion of Soviet medicine in this issue should make us all take thought of the course upon which American medicine is embarked at the present time. We physicians are notoriously poor economists, both in theory and in practice, and yet we are being swiftly carried by the irresistible currents of the time into an uncharted economic sea where we must perforce either lay a course for ourselves or abandon the helm entirely to the politicians and the reformers.

The main direction of the current is plain to be seen. We cannot blind ourselves to the fact that we are steadily drifting away from individualism toward more and more organization in medicine. In Europe we have watched one country after another go over to state medicine in spite of the vehement opposition of the profession, and on the whole we must admit it is so firmly established there now that there is little likelihood of its early abandonment.

Even in our own country, the last stronghold of "record individualism", we

ical schools would be the most effective possible means of impressing the importance of such examinations upon the coming practitioners of medicine, and developing in them an acute tuberculosis consciousness before they leave the school.

To supplement the excellent work done by McPhedran, Landis and Opie at the University of Pennsylvania Medical School, and by Myers at the University of Minnesota, it would be valuable to carry on parallel routine examinations among our medical students, and among students in comparable graduate schools such as law or business. This should give us some measure as to whether the risk in medical students is greater than in a comparable group of the same age, due possibly to actual contact with the disease.

For your interest, I am enclosing a table showing the X-ray findings in several groups of college and normal school students in Massachusetts. These X-rays were taken during the years 1925, 1926,

and 1927. All the films were read by Dr. Chadwick and Dr. Morgan at the Westfield State Sanatorium, so that the interpretation of the whole group is as uniform as can be made. It is rather surprising, I think, what a low proportion of these college and normal school freshmen and high school students showed actual pulmonary infiltration. It is, of course, conceivable that the rather careful selection at the time of admission, and physical examination which in most cases accompanies that selection, would eliminate the majority of active cases of tuberculosis. This table does not, of course, measure the development of tuberculosis in a group of such students during the time they are subject to the strains of intensive work.

No tuberculin tests were done on this group of students, but X-rays were taken of practically the whole class in each institution.

ALTON S. POPE, M.D.

Director, Massachusetts Division of Tuberculosis.

Synopsis of Main Findings in X-Ray Films Taken in Massachusetts Colleges,
Normal Schools, and Secondary Schools, 1925, 1926, and 1927.

		Number of Films Taken	Cases Showing Calcified Glands	Cases Showing Primary Lesions	Cases Showing Definite Mottling at Right Top	Cases Showing Definite Mottling at Both Tops	Cases Showing Definite Haziness at Base of Lung (Pleurisy?)	Cases Showing Calcified Cervical Glands	Cases Showing Cervical Ribs	Scoliosis	Heart Definitely Enlarged	Heart and Trachea Displaced Right
Harvard College (Freshmen)	1926	840	8	32	2	0	1	1	0	6	0	0
Smith College (Freshmen)	1925	588	18	46	1	0	0	1	1	1	1	0
Smith College (Freshmen)	1926	647	9	29	0	0	0	2	6	1	0	0
Worcester State Normal												
(Freshmen)	1926	131	2	2	1	0	0	0	0	0	0	0
North Adams State Normal												
(Freshmen)	1926	219	3	10	0	0	1	0	4	1	0	0
Mt. Hermon Academy (Freshmen)	1926	232	6	9	0	0	0	0	1	1	1	0
Northfield Seminary (Freshmen)	1926	221	6	11	0	0	0	0	1	0	0	0
High School (Freshmen)	1926	347	5	8	1	0	1	0	1	2	0	0
(All Students) (Stoneham)	1927	419	7	17	0	0	0	0	1	0	3	1
(Randolph)	1927	156	2	6	0	1	0	0	0	0	0	0
Totals		3,800	66	170	5	1	3	3	15	12	5	1

